



”SMARTER... GREENER... SAFER...”

Renewable sources of energy



WHAT ARE RENEWABLE SOURCES OF ENERGY?

Renewable energy sources are sources that respect human natural resources, so the health of the man and the planet. These energy sources are regenerated after each cycle of use and, therefore, are inexhaustible.



1) EXAMPLES OF RENEWABLE SOURCES OF ENERGY

- **Wind power**

Wind blows to a wind turbine and rotates it. Then the generator turns it into electricity

- **Hydropower**

Water runs through hydroelectric power plant. Inside of it water rotates the turbine and again the generator turns it into electricity

- **Solar panels**

When the sun shines onto solar panels it gathers the heat and turns it into energy. The heat can be used to warm up houses.



- **Wave power**

It is a way to use waves to create electricity. The technique is still being developed

- **Biomass**

Biomass contains energy from the sun. Examples of biomass: biofuel, biogas, burning wood or pellets.

- **Geothermal energy**

Energy from the original formation of the planet and from radioactive decay of materials. Commonly used in Iceland.

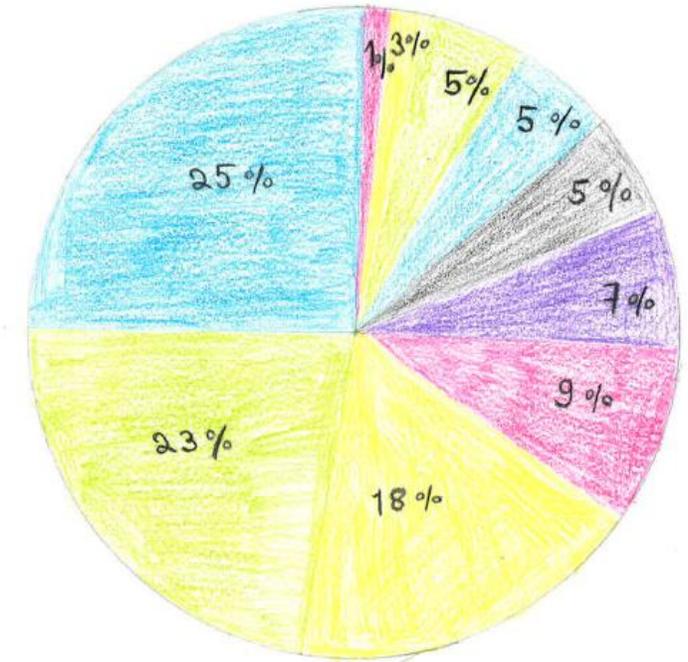
- **Geothermal heating**

Energy comes from solar energy absorbed at the surface.

2) EXAMPLES OF GREEN ENERGY BEING MOST COMMONLY USED IN FINLAND

Energy use in Finland

Finland has the second-highest share of renewable energy in Europe (after Sweden). The use of renewable energy sources in the production of electricity and district heat has progressed rapidly. In the last five years, the use of renewable energy sources in the production of district heat has doubled to 36 per cent.

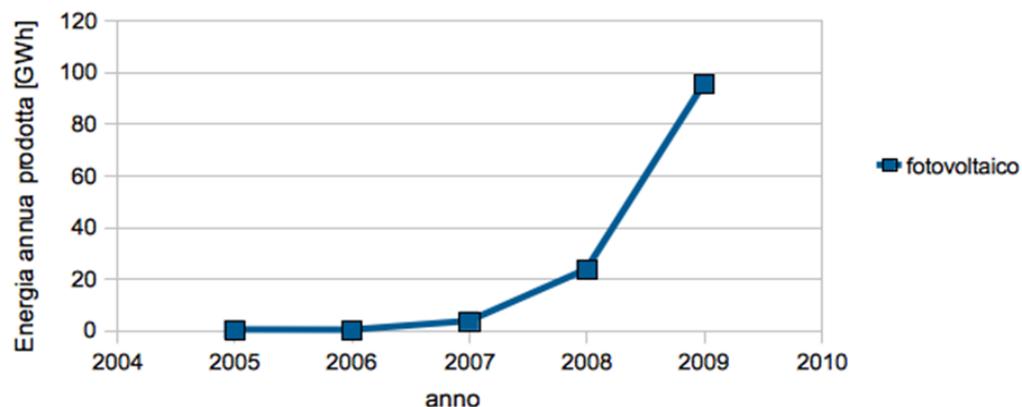


- Wood fuel
- oil
- nuclear power
- charcoal
- natural gas
- net imports of electricity
- hydropower
- peat
- others
- wind power

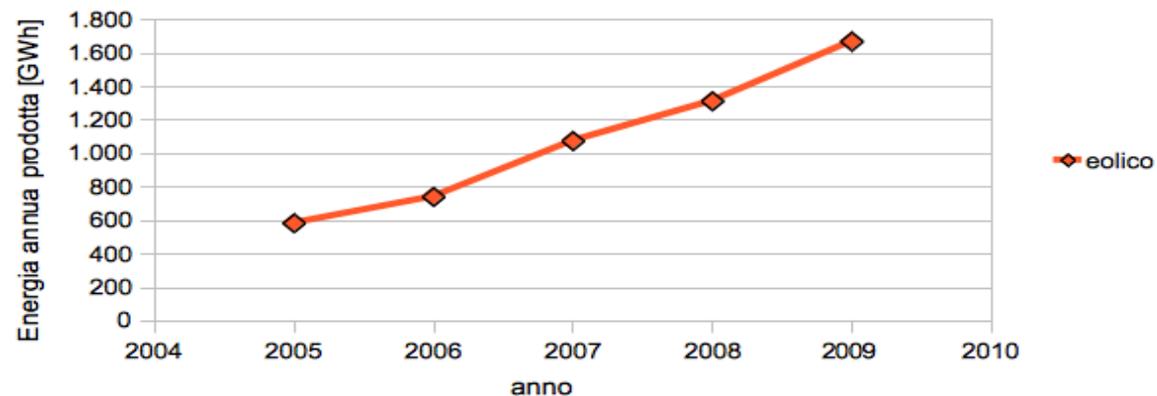
THE GREEN ENERGY IN ITALY

In the recent years we can observe growth of renewable energy used in Italy and especially in Puglia and especially the photovoltaic systems. In fact, the photovoltaic system is the most used technology, with the 97,9 % followed by the eolic system with the 1,9% and by hydroelectric plants.

Energia elettrica prodotta in Puglia
fotovoltaico [GWh]



Energia elettrica prodotta in Puglia
eolico [GWh]



GREEN ENERGY IN POLAND

Poland national target for the share of renewable sources in gross final consumption of energy in 2020 is 15%. The expected total energy consumption in 2020 is 69,200 ktoe and hence the amount of energy from renewable sources in target year 2020 should be 10,380.5 ktoe. National Renewable Energy Action Plan sets a target of the share of renewable energies to be 19.13% in electricity sector, 17.05% in heating/cooling sector and 10.14% in transport sector by 2020.

GREEN ENERGY IN PORTUGAL

Renewable energy in Portugal was the source for 25.7% of energy consumption in 2013. In 2014, 63% of Portugal's electricity needs were supplied by renewable sources. In 2016, 58% of the power produced in Portugal came from renewable sources, an increase against the previous year (50.4%), while renewable energy consumption represented 27.2% (early data) of the total consumption.